

RECEIVED**CENTRAL FAX CENTER**Amendment
Serial No. 10/634,700**JUL 11 2008**

Docket 5000-1-438

REMARKS

Reconsideration of all grounds of rejection in the Office Action, and allowance of all of the pending claims are respectfully requested in light of the above amendments and the following remarks. Claims 1-5 remain pending herein.

Claim 1 has amended to clarify the recitation regarding the step (a) to recite in part:

a) creating an Ethernet transmission frame including a logical link comprising an exclusive private link in a point-to-multipoint EPON system comprising the OLT and a plurality of ONU's connected to the OLT.

and

b) transmitting the Ethernet transmission frame to a destination user independently of an environment of a physical (PHY) layer in the EPON system to a destination user.

Support is found for the changes to step "a" in the specification at least page 6, lines 2-6 and page 7, lines 5-10, and for step "b" at page 5, line 20 to page 6, line 2, and page 14, lines 5-8.

The specification is objected to for allegedly failing to provide antecedent basis for the recitation of "transmitting the Ethernet transmission frame independently of a physical (PHY) layer in the EPON system to a destination user". Claims 1-5 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly not being enabled by the specification. Claims 1-5 stand rejected 35 U.S.C. §112, second paragraph, as allegedly lacking antecedent basis regard the recitation of "transmitting the Ethernet transmission frame independently of a physical (PHY) layer in the EPON system to a destination

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user". Claim 1-5 stand rejected under 35 USC § 103(a) as allegedly being obvious over Sala *et al.* (US 2003/0117998) ("Sala") and further in view of Rothenberg (US 5,432,850). Applicant respectfully submits that this ground of rejection is overcome for the reasons indicated herein below.

(1) With regard to the objection to the specification, Applicant respectfully submits that the amendment to step (b) of claim 1 clarifies that the transmission is PHY independent, meaning independently of an environment of a PHY. From a review of the response to the arguments in the Office Action, it appears that the previous claim language of step (b) was interpreted to mean separate or apart from the PHY layer, and thus Applicant has clarified this particular recitation.

Thus, for at least the above reasons, Applicant respectfully requests withdrawal of the objection to the specification.

(2) With regard to the rejection of claims 1-5 stand rejected under 35 U.S.C. §112, first paragraph, Applicant again refers to the amendment to step (b) of claim 1 and the above explanation that the data is not transmitted independently of the PHY layer. Various types of PHY layers are compatible with the claimed invention, and the recitation now clarifies that the transmission is independent of a type of PHY layer.

Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

(3) With regard to the rejection of claims 1-5 under Claims 1-5 stand rejected 35 U.S.C. §112, second paragraph, Applicant again refers to the above explanation and respectfully submits that the amended recitation of step (b) overcome the rejection thereof.

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Reconsideration and withdrawal of this ground of rejection are respectfully requested.

(4) With regard to the rejection of claims 1-5 under 35 USC § 103(a) as allegedly being obvious over Sala in view of Rothenberg, Applicant first respectfully submits that in reply to the response to the arguments, when the Applicant argues an advantage of the claimed invention, such an argument is permissible under 35 U.S.C. §111(b) and is provided by the Applicant as part of the overall response to rebut a prima facie case of obviousness. The Applicant arguing an advantage of the claimed invention as part of a response to a rejection under 35 U.S.C. §103(a) is not a general allegation that does not point how the language of the claims patentably distinguishes from the references.

Further, Applicant's undersigned attorney is well-versed with *In re Van Geuns* and notes that the cited portion of the specification was provided for explanatory purposes, not for importing limitations from the specification into the claims, but to have the Examiner interpret the claims in view of the specification.

Applicant respectfully submits that claim 1, as discussed above, has been amended to recite in part "a) creating an Ethernet transmission frame including a logical link comprising an exclusive private link in a point-to-multipoint EPON system comprising the OLT and a plurality of ONU's connected to the OLT. said Ethernet transmission frame comprising a data field having encrypted security data," which again finds support at least in the specification at least pages 6, lines 2-6, and page 7, lines 5-10.

With regard to the combination of Sala and Rothenberg, Applicant respectfully submits that the combination of references would have failed as a combination to

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disclose, suggest, or in any other way render obvious present claim 1 at the time of invention to a person of ordinary skill in the art, as the combination of references at least fails to disclose the quoted recitation in claim 1 in the previous paragraph.

For example, with regard to the specific claim language recited above, the combination of Sala and Rothenberg fails as a combination to disclose or render obvious at least the recited step of:

a) creating an Ethernet transmission frame including a logical link comprising an exclusive private link in a point-to-multipoint EPON system comprising the OLT and a plurality of ONU's connected to the OLT, said Ethernet transmission frame comprising a data field having encrypted security data, a key information field for storing key information used for decrypting the encrypted security data of the data field, and said transmission frame further comprising a security frame providing an indication that security data is being transmitted, said security frame having an ONU ID field for indicating ONU ID information identified by an ONU with the destination user and a user ID field for indicating a security ID (SID) identified by the destination user,
wherein the ONU ID field includes a group ID bit field, a logical link ID field, and a security ID field for association with the logical link ID field to provide a group ID for a plurality of management entities controlled by a single ONU, and wherein a variety of classes are provided according to a total number of security IDs of said security ID field controlled by the management entity; ...

In contrast to claim 1 of the present invention, the combination of Sala and Rothenberg does not disclose and would not have rendered obvious at the time of invention the recitation regarding the creating of an Ethernet transmission frame including a logical link comprising an exclusive private link in a point-to-multipoint EPON system comprising the OLT and a plurality of ONU's connected to the OLT.

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More particularly, with regard to the combination of Sala and Rothenberg, the combination fails to obviate any of the present claims as Sala and Rothenberg both are completely silent with regard to a "logical link comprising an exclusive private link in a point-to-multi-point EPON system".

The method recited by present claim 1 is novel and nonobvious, and in view of the combination Sala and Rothenberg, would not have been obvious to a person of ordinary skill in the art at the time of invention.

The presently claimed invention provides advantages in that, for example, by transmitting the Ethernet frame having the logical link ID field inserted therein as claimed, the method is a PHY independent technique that is compatible with a number of different physical environments associated with other physical layers and network topologies). Applicant notes that with regard to the combination of references, the Examiner's reference to paragraph [0047] of Sala does not disclose or suggest the step of "transmitting the Ethernet transmission frame to a destination user independently of an environment of a physical (PHY) layer in the EPON system" and merely states implementation being possible with other networks, which is not the same.

In contrast to the claimed invention, the combination of Sala and Rothenberg at best discloses a PHY emulation method so that the PHY emulates a point-to-point and/or shared communication link (see for example, Sala at page 2, paragraph [0043]). Applicant respectfully submits that such an emulation scheme is disclosed by the Applicant's Background at page 2, line 22, to page 3, line 3.

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Applicant respectfully submits that the combination of Sala and Rothenberg fails to disclose or suggest at least the foregoing recitations of claim 1.

Applicant also respectfully submits that the combination of elements, as recited in the present claims, would not have been obvious as being within the ordinary level of skill in the art (*KSR International v. Teleflex*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007)).

For at least the above reasons, reconsideration and withdrawal of all grounds of rejection under 35 U.S.C. §103(a) are respectfully requested.

With regard to the rejections of claims 2-5, each of these claims is believed to patentable at least for dependence from claim 1, and because of an independent basis for patentability, as each claim defines an additional aspect of the invention. Accordingly, the individual consideration of the patentability of each claim on its own merits is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all grounds of objection and rejection in the Final Office Action are overcome. A Notice of Allowance is respectfully requested.

While no fees are believed due at this time, please credit any overage or charge any deficiency to deposit account number 502-470.


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Should the Examiner deem that there are any issues, which may be best, resolved by telephone communication, please contact Applicant's undersigned Attorney at the number listed below.

Respectfully submitted,
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